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ABSTRACT

This syllabus for a continuing education course describes the OCLC system and considers how it can be used by health science libraries. The general governance and administrative structure of OCLC and its network affiliates are detailed, and the OCLC subsystems--online union catalog, serials, interlibrary loan, and acquisitions--and their major components are discussed. Future subsystems and enhancements are considered, and the cataloging work flow is detailed. The use of OCLC by the National Library of Medicine is described, and the advantages and disadvantages, as well as costs and benefits, of hospital library use of OCLC are detailed. Appendixes include a chart of the OCLC Governance Structure; examples of OCLC monograph, serials, and audiovisual records; sample monograph and interlibrary loan (ILL) record work forms; samples of ILL message waiting and response screens; a diagram of the cataloging work flow; a list of networks offering OCLC services; and a glossary of terms. (Author/EW)

MEDICAL LIBRARY ASSOCIATION COURSES FOR CONTINUING EDUCATION

CE 35
OCLC Utilization in Health Sciences Libraries

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OCLC UTILIZATION IN HEALTH SCIENCE LIBRARIES

This introductory course presents basic information about the use of OCLC systems in health sciences libraries.

Course Objectives

At the conclusion of the course, participants will be able to:

1. Describe the general governance and administrative structure of OCLC and its network affiliates.
2. Name the OCLC subsystems and their major components.
3. Differentiate among the major fields of the MARC record.
4. Modify a library's cataloging operation for use of OCLC.
5. List three ways in which a library may participate in OCLC.

This syllabus is only *one* part of a complete instructional package. Other components of the package consist of a qualified instructor, an adequate instructional environment, supplementary classroom materials, and an evaluation of the instruction received. Continuing Education Units (CEUs) for this course may be granted only by the Medical Library Association.

Revised edition, 1980
(Earlier editions, 1976, 1977)

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OVERVIEW

In its literature, OCLC, Inc. describes itself as a "not-for-profit corporation based in Columbus, Ohio which operates an on-line library system for academic, public, and special libraries." Its "raison d'etre" is characterized as follows:

> "The purpose of OCLC is to promote the evolution of library use, of libraries themselves, and of librarianship, OCLC has two fundamental objectives: to increase availability of library resources for users of participating libraries, and to reduce the rate of rise of per-unit costs in libraries."

OCLC has pursued its objectives by the development of an on-line computer system accessed by cathode ray tube (CRT) terminals through dedicated leased synchronous telephone lines. The backbone of the OCLC system is an on-line bibliographic data base containing several million records. Users of the dedicated CRT's can then access the data base of bibliographic records by typing simple commands and retrieving needed information within a few seconds.

Several subsystems have been designed around the on-line data base. The total design provides for these systems: On-line Union Catalog and Shared Cataloging, Interlibrary Loan, Serials Control and Acquisitions.

Other component systems are in early development stages. These include: Subject Access, Circulation Control and Remote Catalog Access.

With all subsystems combined, OCLC, Inc. suggests that:

> "These subsystems will constitute an integrated, comprehensive on-line system to support libraries nationwide. The systems are being developed so that a future national or international network could be established without major redesign and major investment in new software."

How then does an individual library participate in this on-line national system? It participates by joining a local or regional network which will facilitate its interaction with the various OCLC systems. This library/network/OCLC relationship will be addressed in more detail later.

HISTORY

OCLC was formed in 1967 by the Ohio College Library Association. Its first endeavor was a shared cataloging system for 54 Ohio libraries. For the first few years, the network was open only to Ohio libraries. However, in March, 1973, services were extended outside Ohio.

The next several years saw rapid growth of the system, both in numbers of libraries participating and size of the on-line data base. By 1980 over 2,500 libraries in 50 states were participating in the network, and the data base contained over 6 million records and over 50,000 locations.

Subsystem development proceeded slowly during the seventies. The Serials Subsystem was opened to a few libraries in 1976, but further expansion did not take place until 1979. The ILL Subsystem was made available for use in Spring 1979, while the Acquisitions Subsystem target date was late 1980.

In 1977 the organization changed its name to OCLC, Inc. to reflect nationwide growth and allow for further expansion and development.

Health sciences library participation in OCLC began in 1972 when the Cleveland Health Sciences Library and the Medical College of Ohio at Toledo Library became members. By 1980 over 125 medical, hospital, and health sciences libraries were users of OCLC, Inc. systems.

OCLC GOVERNANCE

The OCLC, Inc. governance structure was adopted in December, 1977, and is uniquely suited to OCLC's role as a not-for-profit corporation with hundreds of member participants, each of which is also represented by a regional or local network.

OCLC is governed by a 15-member Board of Trustees which includes individuals from law, finance, management, librarianship, computer science and other fields. Figure 1 shows governance structure relationships. Libraries participating in organizations contracting with OCLC, Inc. are also members of OCLC, Inc. While decision-making powers with regard to replacement of management and approval of policy and budgets reside in the Board, the Users Council provides for a formal means for participating libraries and networks to participate in election of trustees and thus in policy decisions.

In addition to this formal governance structure, various specialized committees (composed of individual library members) interact with OCLC staff regarding specific tasks. Committees include both an OCLC Advisory Committee on Cataloging, an OCLC Internetwork Quality Control Committee, and various ad hoc committees.

Internal Organization

Because of its rapid growth, OCLC, Inc. is a dynamic organization which is constantly changing in order to facilitate its internal organizational requirements and the needs of its "users."

It is in general, however, divided into several major divisions. Management functions are carried out by two divisions, Finance and Administrative Services, as well as several staff organizations responsible for various types of planning and pure research.

The Development Division is responsible for the technical development of various OCLC subsystems as well as system improvements. The Computer Facilities Division handles the on-going technical operations of OCLC systems — everything from telecommunications to data processing to terminal maintenance.

User Services Division is the one most directly involved with libraries. Various units of this division are responsible for training network staffs to use new subsystems. User Services personnel are the "experts" regarding *use* of OCLC systems. As a result, they constantly answer specific questions related to the data base and use of various currently operating systems. In addition, this division handles the quality control maintenance of the OCLC On-Line Union Catalog; error reports received from individual libraries are verified and corrected daily. The division also operates retrospective conversion projects, whereby OCLC directly contracts with libraries to convert (i.e., input) their pre-OCLC records into the data base.

In short, OCLC, Inc. staff, now numbering several hundred employees, are all involved in projects related to the use of computer systems by libraries and library-related technological advancements.

Affiliations

As previously mentioned, libraries participate in the OCLC On-Line Library System through various networks, either regional, state or local. These networks coordinate telecommunications, provide training in use of OCLC subsystems, disseminate system update information, and, in general, act as liaison between the individual library users and OCLC. An individual library can participate in OCLC *only* by joining a network. See Figure 10 for a list of OCLC networks.

Some networks also provide other services besides OCLC, but there are many networks which offer only OCLC services. In general, however, a library has little choice in the matter of network affiliation, as there is normally only one network serving a particular geographic area. There are over 20 networks in the United States, ranging from such regionally oriented giants as SOLINET, AMIGOS and NELINET to local networks such as FAUL, a local New York network and state networks such as WLC (Wisconsin Library Consortium) and OHIONET.

OCLC also interacts with other national organizations and institutions such as the Library of Congress (regarding CATLINE tapes), On-Line vendors such as LOCKHEED and DIALOG regarding future system offerings), and many others.

ON-LINE UNION CATALOG AND CATALOGING SUBSYSTEM

On-Line Union Catalog

OCLC's On-Line Union Catalog is an on-line data base containing several million records of bibliographic data representing titles which span modern history – from a Gutenberg Bible to a current fictional best seller.

Each record has been created either by one of OCLC's hundreds of member libraries or by the Library of Congress through its MARC (Machine-Readable Cataloging) Distribution Service, or by the National Library of Medicine through CATLINE.

Many member libraries are using retrospective conversion to convert past cataloging to machine-readable form. As a result the data base has become increasingly useful for locating bibliographic materials; there are many millions of locations contained in the data base.

A unique record (Figure 2) in the On-Line Union Catalog contains descriptive information pertaining to a single bibliographic work; in addition, it contains location information for that work.

Locations are identified through a list of symbols, each representing an OCLC member library which has cataloged that particular work through the OCLC Cataloging Subsystem.

The On-Line Union Catalog contains records for many different types of materials: books, serials, manuscripts, maps, music scores, sound recordings, as well as audiovisual media and special instructional materials and kits. The materials are in many languages, but only languages using the Roman alphabet are represented.

Each record in the On-Line Union Catalog contains the same information found on a traditional catalog card, as well as coded information usable for retrieval.

The description of an item is coded using a special machine-readable format called the MARC format. This format was developed for the Library of Congress and has been adopted by OCLC. A separate format is used for each of the seven types of media listed above. Figures 3 and 4 are examples of two types of formats. The MARC format record is divided into two distinct sections – the fixed field and the variable fields. Each record contains one fixed field and numerous variable fields. The fixed field information is more easily retrievable, as each element contains a finite amount of coded information. This information describes the record itself and the work cataloged. Variable fields contain information normally seen on a typical catalog card; these fields differ greatly in length and each is identifiable by a 3-digit tag. Other elements of a variable field are identified by indicators and subfield codes. These three content designators perform such functions as sorting information for retrieval, spacing information on catalog cards, designating types of filing, etc.

On-Line Cataloging

In order to catalog an item using the Cataloging Subsystem, a user must first attempt to retrieve a bibliographic record by searching the On-Line Union Catalog. Searching may be done on OCLC by combinations of latters or numbers in the following pattern:

Index File	Search Key Format
LCCN	1 or 2 digits, hyphen, 1 to 6 digits
ISBN	10 digits
ISSN	4 digits, hyphen, 4 digits
CODEN	5 or 6 characteristics
Personal Name	4, 3, 1
Corporate Name	4, 3, 1
Title	3, 2, 2, 1
Name/Title	4, 4
OCLC Control Number	number sign, 1 or more digits

Cataloging on the system requires careful use of the strategies for searching because OCLC system standards demand that the user add holding symbols and produce cards on an ideal of one bibliographic record per piece or unique title. One piece of material is distinguished by a separate title main entry, and LC card number as well as a unique imprint. Even if all other parts are the same, a different imprint or publisher statement indicates a separate piece. If two records exist in the OCLC system with matching main entry, imprint, and title and LC card numbers, the OCLC system will automatically "meld" the two into one record. If one of the points is not in the record (i.e., if a member library has a different main entry), the two records will remain in the OCLC system as *duplicates*. The ideal record for a piece is LC MARC cataloging, or as close to it as possible.

Most member libraries find cataloging in the On-Line Union Catalog for almost 95% of their current titles. If a suitable record is found, a library need only edit the record to conform with local cataloging practices.

The computer will already be programmed with the library's *profile*. This predetermines many of the configurations on the catalog card including card sets for various branch libraries, the holdings code, etc. *Profiling* is done with network staff at the beginning of membership in the system.

The fields which generate information are edited by moving a *cursor* across the display screen and inserting or deleting information. Each field is sent separately. When the information has been altered to conform to local cataloging practice, the screen is reformatted and surveyed for errors. The record is then *produced* which generates a local archival tape. These archival tapes are then used by OCLC to produce catalog cards, magnetic tapes, and accession lists.

If no record is found for a particular title, but a similar record is found, the system can incorporate some information from this similar record into a *new* record.

If no similar record is available in the On-Line Union Catalog for an item in hand, a library may create a record using a work form (Figure 5). After the information has been input in the appropriate fields, the record is *produced* as in an edited record.

There are several products available through use of the Cataloging Subsystem. OCLC generates catalog cards which are customized and presorted according to a library's unique specifications. These cards are shipped to libraries daily and generally arrive within ten days after production. Accession lists of newly cataloged materials are available at specified intervals (monthly, semi-monthly, quarterly). Lists are supplied either on multilith masters or in camera-ready form.

The OCLC-MARC Subscription Service provides a machine-readable copy of a library's cataloging records. These tapes can be shipped at specified intervals and may be used for such purposes as the production of microform catalogs and circulation records.

Future enhancements (in development) of the Cataloging Subsystem include the development of a Local Data Record which will mean the retention of some local cataloging elements on line. New indexes and reorganization of displays are also planned.

SERIALS SUBSYSTEM

The Serials Control Subsystem provides for three elements of inventory control for serials literature: Check-in, Claiming, and Binding. It also furnishes up-to-date information about a library's holdings.

Using the Serials Subsystem, a library can access detailed copy-specific and location information for its own library. In addition, using the On-Line Union Catalog, it can access bibliographic information for serials located in any OCLC member library (provided the library has input its records into the system). A large serials data base has been built within OCLC through the CONSER (Conversion of Serials) project. As a result of this project, over 72,000 titles have been authorized by the national libraries. However, total serial titles within OCLC exceed 200,000.

The Check-in component of the Serials Subsystem allows a library to build its own online file of detailed holdings information. Upon receipt of an issue, a library retrieves the Check-in record for that title and checks in the issue, recording receipt date if desired (receipt dates may be input for the last six issues).

The system automatically updates holdings information. It then predicts and displays the next expected issue number and date of receipt; this is based upon the title's frequency. The system also identifies a missing issue if a gap occurs in the issues checked in.

In the Claiming component (under development) an individual library may set a claim cycle for each serial title. The cycle specifies the amount of time (in days) after which an item is considered to be overdue. A library may choose any of several methods for handling claims:

Automatic: The system automatically generates claim notices according to a library's predetermined cycle.

Semiautomatic: The system generates messages which display on the terminal; it produces claim notices only on user command.

Nonautomatic: The system generates claim notices only on user command. It also periodically generates a file of titles which have shown no activity (during a library-defined period).

The Binding component (under development) generates bindery notices after determining that all items of the library's predefined bindery unit have been checked in. The bindery notice includes such items as the bindery name, as well as binding type, color, and lettering.

The Interlibrary Loan component (under development) will allow for fuller support of the ILL Subsystem by allowing access to local serials holding records for all member libraries.

The Union List component will create, maintain, and distribute serials union list information through summary holdings for various consortia and local networks.

When used in conjunction with the Acquisitions Subsystem and the Cataloging Subsystem, virtually complete control of serials is possible through the Serials Subsystem. In addition, the system provides for specific user access and supports other OCLC subsystems; it also provides ancillary products of benefit to libraries.

INTERLIBRARY LOAN SUBSYSTEM

The ILL Subsystem is an on-line communication system which allows library to library interaction and is designed to support more efficient exchange of library resources. The major files of this subsystem are:

- The On-Line Union Catalog
- The ILL Message Waiting File
- The ILL Transaction File

Through use of these files and their component records, it is possible for a library to send and receive requests, as well as to respond to requests.

Requests are created in two ways, either using information extracted automatically from a record found in the On-Line Union Catalog; or in cases where there is no record in the Union Catalog, through inputting the necessary bibliographic information. In both cases, a Transaction Record is created. An ILL Transaction Record Work Form is illustrated in Figure 6.

Upon completing a new Transaction Record, a library sends its ILL request through the system, in turn, to any five (OCLC member) libraries selected by the initiating library or borrower. A request may reside with a potential lender for up to four days. If a lender library has not responded within this period, the system automatically refers the request to the next potential lender. This process, in effect, creates a referral system.

A lender adds information such as *date shipped, date due, lending charges,* etc., to the Transaction Record. In fact, until the time the transaction is complete, both borrowers and lenders update the on-line Transaction Record.

It should be noted that photocopies do not progress through the entire transaction cycle as no *date due* is necessary. Therefore, the transaction is complete when the borrowing library enters the *date received* on the Transaction Record.

A library's Transaction File is comprised of Transaction Records in which it is either a borrower or a lender. (A library cannot access records for transactions in which it is not involved.) A library's Transaction File records may be retrieved by the use of several search keys related to various index files. Access points for retrieval are as follows:

ILL Number	Patron Number
Title	Borrowing Library (OCLC Symbol)
Name-Title	Lending Library (OCLC Symbol)
Call Number	Patron Name

The on-line system allows messages to be sent from borrowing to lending library and vice-versa through a Message Waiting File (Figure 7 and Figure 8). This file lists summaries

of active requests, responses, recalls and renewals. By entering the appropriate command, a library can receive a display of its active records, including the "status" of each record.

A "status" value is automatically assigned to each record as it progresses through a full transaction cycle. The "status" will change with each transaction. The system allows for the following "status" codes:

Pending:	A request has not received a positive response. A request has not reached all potential lending libraries.
Will Supply:	A lender responded affirmatively to a request from a borrower.
Shipped:	The lender entered *date shipped* on the Transaction Record.
Retry:	A potential lender could not fill a request immediately, but entered *date* on Transaction Record when item would be available.
Unfilled:	All potential lenders up to five responded negatively to request.
Expired:	*Need before date* entered by borrower was reached before an affirmative response was obtained.
Received:	A borrower received item and entered *received date* on Transaction Record.
Renewal Request:	A borrower requested renewal and entered *renewal date* on Transaction Record.
Renewal OK:	A lender ok'd renewal and entered *new due date* on Transaction Record.
Recall:	A lender initiated a recall command.
Returned:	A borrower returned loaned items and supplied *return date* on Transaction Record.

Further enhancements of the subsystem will allow activity report generation as well as the completion of various types of statistics which will show loan patterns and other management data.

ACQUISITIONS SUBSYSTEM

The Acquisitions Subsystem allows a library to order and receive one or more copies of a particular title for any number of specified locations. The system provides for ordering sets, serials, series, continuations, or an individual title. It promotes more efficient acquisitions processing by such cost savers as the elimination of repetitive typing and the use of existing bibliographic records. The acquisitions process through the subsystem is comprised of several major components and processes.

To acquire an item through this system the title is first searched in the On-Line Union Catalog to locate a bibliographic record to verify the citation. This record is then used as the basis for the local acquisition record. Selected data from the bibliographic record is automatically transferred to this Acquisition Record display.

If there is no existing record in the On-Line Union Catalog (either a full bibliographic record or an order-level record), a new order-level bibliographic record can be established; this can be accomplished either by modifying existing data on a similar record or entering new bibliographic data. After an Acquisition Record has been established, specific order data is then entered on this local acquisition record.

The next step is *producing* the order from this local record. This step initiates either on-line or off-line order production at OCLC and adds the record to the acquisitions files.

The order is then sent to the vendor from OCLC with optional copies going to the initiating library.

When a local Acquisition Record is created, the system automatically updates the appropriate fund records. However, detailed local order information is available *only* to the initiating library. This provides security for each library using the system. In addition, local acquisition records and fund information is available only to "authorized" personnel in the local library. Each individual institution determines its own authorization modes. A variety of modes are possible ranging from *search only* (Displays on-order information) to *financial,* which allows for modifying fund records, to *partial,* which allows for creating and cancelling orders, and several others.

Two levels of acquisitions in-process information may be displayed at a users request, a summary display for the local institution showing all in-process orders for that title, or a display of OCLC institution symbols listing libraries which are processing or have cataloged the title. In short, the system allows for complete local control within one system from pre-order searching to cataloging. At the same time it can greatly assist cooperative acquisitions programs.

The system also allows for manually updating the local record with either vendor or initiating library information. However, as previously indicated, the system automatically generates and adjusts appropriate fund records. It also automatically changes the status of the record when necessary.

After a library receives an item ordered through the system, it records receipt and the system adjusts appropriate records accordingly.

Other Acquisitions System functions allow the local library to:

- Generate off-line reports of fund activity (current fund activity including both encumbrances and expenditures is available on-line).
- Renew subscriptions.
- Request price quotes.
- Access a "HELP" screen (a prompting device that serves as a reminder to the user for the data needed in an order record).
- Initiate blanket orders and approval codes.
- Handle gift and exchange agreements.
- Create deposit account orders.
- Locate vendor information from an on-line directory.
- Send prepaid orders.
- Cancel orders.

Data can be retrieved from the Acquisitions Subsystem by the use of several access points – all On-Line Union Catalog search keys, order numbers, fund names and fund numbers.

In summary, the Acquisitions Subsystem will accommodate everything from processing and receiving orders to internal access control from order initiation to cataloging.

FUTURE SUBSYSTEMS/ENHANCEMENTS

OCLC is now doing research in the area of enhanced public service components such as Subject Access, Circulation Control and Remote Catalog Access. In addition, it is studying the possibility of serving as a link between the individual library and other data bases available through vendors such as LOCKHEED. A new terminal (available in 1981) will facilitate this process. In addition, this new terminal is designed to allow for local editing of a record (that is — a record may be edited within a library CRT and without sending a message to OCLC).

Circulation control is being developed in conjunction with a separate vendor rather than through a unique OCLC subsystem. The Local Data File and Subject Access are discussed under the Cataloging Subsystem. Another future enhancement planned is a Management Subsystem which will compile and analyze statistics and data for management purposes.

CATALOGING WORKFLOW

With the advent of OCLC, workflow changes from previous patterns. Using OCLC does not preclude searching for NUC and NLM information if it is *not* already in the data base. However, it is very effective to presearch OCLC to see what is in the system before searching printed sources. An NLM record is often available in the system, as current CATLINE tapes have been feeding directly into OCLC since August of 1979.

A library will find that a printer attached to the OCLC terminal is very beneficial to the efficiency of the cataloging operation. A printer can be used to generate a "working copy" of a record for the cataloger. Some printers can generate spine and pocket labels for books. (ILL "picking slips" are another possible output for the printer.)

A number of printers are available for use with the OCLC CRT, including the G. E. Terminet, the Decwriter, and the Diablo. Care should be taken when choosing a printer as there are several questions and factors to consider:

- How important is speed? Speeds vary from 30 CPS (characters per second) to 240 CPS and more.
- Is a dot matrix acceptable?
- How much noise can be tolerated in the cataloging area? (Impact printers are much noiser than thermal printers.)
- Can a particular machine print labels? Multiple copy "Picking Slips?"

Some machines have memory attachments. This allows for batching of data so that labels, booklists, etc., can be printed at one time.

Whether or not a printer is purchased, one consideration for the cataloger is the question of using a workform. Some libraries use individually designed workforms while others work from printer generated work sheets, while still others find they can catalog directly on the terminal. Decisions should be based on an individual library situation, including number and level of cataloging staff, library authority control patterns, size of collection, etc.

Daily utilization of OCLC for cataloging also depends on how many departments will use the system in their routine. Cataloging usually needs the most sustained time period, but Acquisitions, Serials, Interlibrary Loan, and Public Services departments may also be needing time at the terminal. It is often useful to *schedule* the time. It is helpful to avoid peak hours if possible. Saturday service is planned on a continuing basis, and response time before 8:30 a.m. and after 5:00 p.m. is excellent. (Response time is the time it takes to procure an answer after striking *send.*)

One method of handling cataloging production on the OCLC terminal is to "batch" the work in reasonable amounts by day; workslips, forms, etc., are then filed by units of daily production. When OCLC cards arrive (approximately 10 days later) they can be checked for accuracy against the workforms and placed with the books. Using this method,

books representing a day's production can be physically processed and cards filed at the same time. This system keeps the work paced so that there is an even flow of work.

Another method of handling production and workflow uses the same "batching" principle, but books are processed and sent to Public Services after OCLC cataloging on the terminal is complete. Using this method, books are immediately available for users, even though access through the catalog may not be possible for a few days. Figure 9 shows one possible cataloging workflow.

NLM LIBRARIES AND OCLC

A health sciences library which uses NLM classification, MeSH, and NLM cataloging as an authority base, will find that some "give and take" is necessary in using OCLC for cataloging. The authority for OCLC is AACR as practiced by the Library of Congress. It is possible for a library to be profiled (or programmed) to accept only NLM call numbers and MeSH subjects from OCLC. However, authority problems do exist due to differences in form of name used by LC and NLM. Any record can be edited to suit a local library's needs; however, careful authority checking is usually necessary for a health sciences library.

The Health Science OCLC Users Group, established in 1975, provides helpful information for the health sciences library using OCLC. Yearly meetings as well as a newsletter entitled *Start of Message* also provides contact with other OCLC users.

Participation in the Serials, ILL and Acquisitions Subsystems is very similar to that of other types of library participation in these systems. One possible exception is the ILL Subsystem. However, due to various unique lending patterns within different regions of the Regional Medical Library Program, it is not possible to draw general conclusions about health science use of the subsystem.

Although participation in OCLC can be expensive for a small library, access to the system may be economically feasible by use of a conventional terminal through a communications vendor such as TYMNET or by direct access dial-up. Participation in a consortium, whereby several libraries share a regular OCLC CRT, is another method of cutting cost per library.

Libraries which choose either direct access or a vendor must join OCLC through a network just as a regular participant does. Although charges for this type of user vary with the network, in general they are lessened primarily by a smaller overall cost for communications.

Consortium development may take any of a variety of forms. In one case, a large medical or health sciences library might provide the base for hospital libraries to participate in OCLC. It is also possible for a group of hospitals to share *one* terminal (and thus costs) through a consortium. Many combinations of possibilities exist and indeed are in practice at present.

The following groups are examples of shared systems. Several health science and hospital libraries in Washington, D.C. are currently sharing in OCLC participation. CAMA (Columbia, S. C. Area Medical Libraries Association) is another consortium using OCLC, and the Medical Library Center of New York provides OCLC for its member libraries.

A hospital library should consider the overall benefits which OCLC offers before making a decision about the real costs of the system. The following questions are a sample of the issues which should be addressed:

- What benefits will be derived for the library by having access to a *national* data base?
- Is the use of the ILL subsystem a viable and beneficial way to handle interlibrary loans?
- Will it be possible to discontinue any bibliographic or cataloging tools by using OCLC?

In summary, then, many hospital libraries *can* afford OCLC. The library should carefully explore all options with the local network and with other libraries in the area.

COST/BENEFITS OF OCLC

Basic costing mechanisms are dependent on a combination of OCLC methods of charging for subsystem use and an individual network's approach to charges.

OCLC charges are individualized by subsystem. A breakdown of OCLC costing units follows:

FTU (First Time Use):	This represents the first time a library *produces* or *catalogs* on OCLC, using an existing record.
Catalog Cards:	Each card produced by OCLC for a library incurs a finite charge.
Accession Lists:	Charges depend on number of items, frequency, and format of list.
Archival Tapes:	Charges depend on number of items and frequency.
ILL:	The cost is incurred by the initiating or borrowing library at the time a Request is *produced.*
Acquisitions:	The cost is incurred upon order production; extra charges are incurred based on amount of items generated (i.e. orders, claims, etc.)
Public Services Terminals:	Use of these terminals is charged at a particular amount per search; a ceiling is placed on maximum charges.

In addition to the basic costing mechanisms mentioned above, *start-up* charges are assessed to cover *profile* programming and modem installation; in most cases a CRT will also be purchased at time of *start-up.*

Networks handle charges in a variety of ways, but in general, they assess members during *start-up* for training and *profiling.* On-going costs for telecommunications, training, communications and administration are covered either by a surcharge applied on top of basic OCLC fees or various types of administrative charges applied to each library. A library planning to join OCLC *must* contact its local network to determine *exact* charges. (See Figure 10).

Benefits

The benefits of various OCLC subsystems have been delineated under the subsystem descriptions. However, it should be noted that the OCLC On-Line Union Catalog is the largest on-line bibliographic data base in the world. In 1980, it contained over six million records accessed by over 3,000 terminals in the United States. The benefits of having access to a system based on a data base of that size are obvious.

APPENDIX

Figure 1

GOVERNANCE STRUCTURE

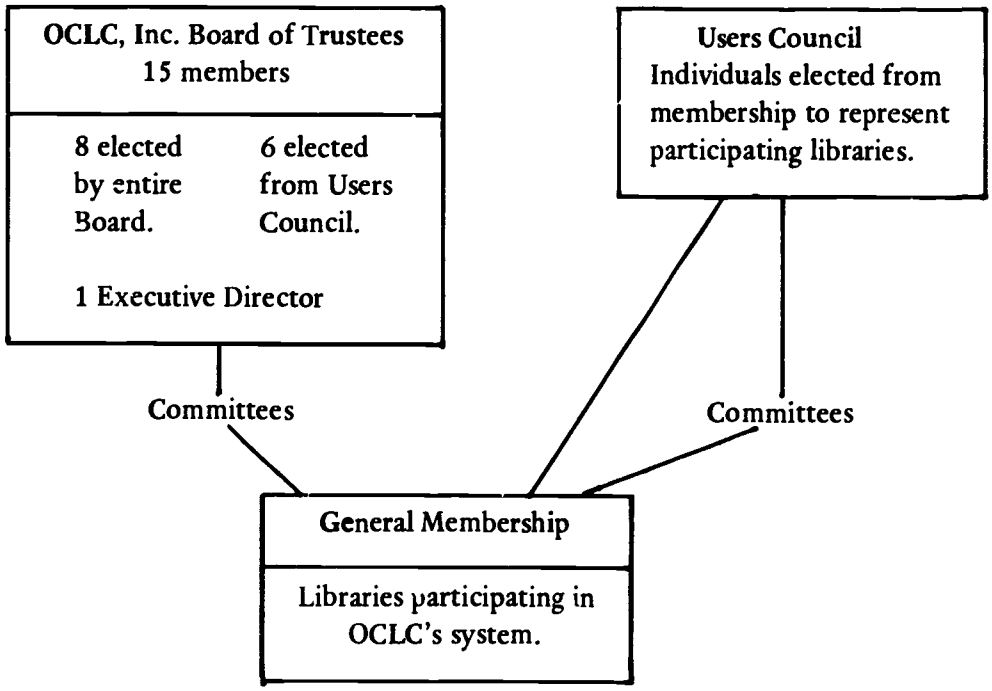

Figure 2a

MONOGRAPH RECORD

OCLC: 5333368 Rec stat: n Entrd: 790816 Used: 800208
Type: a Bib lvl: m Govt pub: Lang: eng Source: d Illus:
Repr: Enc lvl: 8 Conf pub: 1 Ctry: xx Dat tp: s M/F/B: 00
Indx: 1 Mod rec: Festschr: 0 Cont:
Desc: i Int lvl: Dates: 1979,

1 010 79-65203
2 040 NLM ≠c NLM
3 020 0890043787
4 035 7907727 ≠b NLMM
5 060 WI IN71S v.5 (p) ≠a (WL 101.3 N494 1978)
6 096 ≠b
7 049 IHSS
8 245 00 Neural growth and differentiation ≠c edited by Esmail Meisami, Mary A. B. Brazier.
9 260 0 New York : ≠b Raven Press, ≠c 1979.
10 440 0 International Brain Research Organization monograph series ; ≠v v. 5
11 500 Consists of papers given at a symposium at the University of Teheran in 1978.
12 500 Cataloging in publication.
13 610 22 University of Teheran.

Screen 2 of 2

14 650 2 Cell Differentiation ≠x congresses
15 650 2 Nervous System ≠x growth & development ≠x congresses
16 700 10 Meisami, Esmail, ≠e ed.
17 700 10 Brazier, Mary Agnes Burniston, ≠d 1904- ≠e ed.
18 740 1 Symposium on neural growth and differentiation.

Figure 2b

MONOGRAPH RECORD

OCLC: 5798279 Rec stat: n Entrd: 791129 Used: 800208
Type: a Bib lvl: m Govt Pub: Lang: eng Source: d Illus: a
Repr: Enc lvl: Conf Pub: 0 Ctry: xx Dat tp: s M/F/B: 10
Indx: 1 Mod rec: Festschr: 0 Cont: e
Desc: i Int lvl: Dates: 1979,

1 010
2 040 NLM ≠c NLM
3 020 0889780471
4 035 7911230 ≠b NLMM
5 060 WR 13 M681b 1979
6 096 ≠b
7 049 IHSS
8 100 10 Mitchell, John C., ≠d 1923-
9 245 10 Botanical dermatology : ≠b plants and plant products injurious to the skin / ≠c John Mitchell and Arthur Rook, and contributions by Niels Hjorth ... (et al.).
10 260 0 Vancouver, B. C. : ≠b Greenglass, ≠c 1979.
11 300 xiii, 787 p. : ≠b ill.
12 650 2 Dermatitis, Contact ≠x encyclopedias
13 650 2 Plants, Toxic ≠x encyclopedias
14 700 10 Rook, Arthur J.
15 700 10 Hjorth, Niels.

Figure 3

SERIALS RECORD

```
OCLC: 1461220      Rec stat: c Entrd: 750720        Used: 800131
Type: a Bib lvl: s Govt pub:   Lang:  eng Sourc : d S/L ent: 0
Repr:   Enc lvl: I Conf pub: 0 Ctry:   sz Ser tp: p Alphabt: a
Indx: u Mod rec:   Phys med:   Cont:      Frequn:   Pub st:  c
Desc:   Sum ind: u Titl pag: u ISDS:    0 Regulr: x Dates: 1968-99
  1 010
  2 040     MUL ≠c MUL ≠d NSD ≠d TVJ
  3 012      ≠e n
  4 022     0065-2938
  5 030     ADVMBT
  6 035     0013079 ≠b MULS ≠a PITT NO. 0162000006
  7 042     nsdp
  8 060     W1 AD682
  9 096      ≠b
 10 049     IHSS
 11 210     Adv. microcirc.
 12 222 00  Advances in microcirculation
 13 245 00  Advances in microcirculation.
 14 260 00  Basel, ≠b S. Karger.
 15 510 0   Chemical abstracts ≠x 0009-2258
 16 510 0   Biological abstracts ≠x 0006-3169
 17 650  2  Blood Circulation ≠x periodicals
 18 650  2  Blood Vessels ≠x periodicals
Screen 2 of 2
 19 936     Unknown ≠a v. 6 (surrogate)
```

Figure 4

AUDIOVISUAL RECORD

OCLC: 5548148 Rec stat: n Entrd: 720622 Used: 791021
Type: g Bib lvl: m Govt pub: Lang: eng Source: c Leng: 026
InLC: Enc lvl: 1 Type mat: m Ctry: us Dat tp: s MEBE: 0
Tech: 1 Mod rec: Pressbks: Postr: Stills: Scrpt: Other:
Desc: Int lvl: f Dates: 1969,

1 010 72-700623/F
2 040 American Personnel and Guidance Association ≠c DLC
3 007 r ≠b c ≠c a ≠d a ≠e a ≠f d
4 050 BF637.C6
5 082 131.3
6 096 WM 425 MP-35
7 049 IHSS
8 245 03 An Introduction to behavioral counseling. ≠h (Motion picture).
9 261 Counseling Films, ≠d 1969.
10 301 26 min. ≠b sd. ≠c color. ≠d 16 mm.
11 520 A counselor-training film in which Ray E. Hosford demonstrates how a behavioral counselor works with the client and his parents and teachers to help him solve the problem for which he wought counseling. John D. Krumboltz discusses the theories and techniques that are presented.

Screen 2 of 2

12 650 2 Behavior Therapy ≠x motion pictures
13 710 21 Counseling Films, Inc.

Figure 5

MONOGRAPH WORK FORM

```
OCLC: NEW          Rec stat: n Entrd: 770428        Used: 770428
Type: a Bib lvl: m Govt pub:   Lang:      Source: u Illus:
Repr:   Enc lvl: 1 Conf pub: 0 Ctry:   xx Dat tp: n M/F/B: 00
Indx: 0 Mod rec:   Festschr: 0 Cont:
Desc:   Int lvl:   Dates:     ,
  1 010
  2 040       ≠c OCL
  3 021
  4 041 -     ≠b
  5 090       ≠b
  6 049      OCLC
  7 1-- --    ≠d
  8 24- --    ≠b ≠c
  9 250
 10 260 -     ≠b ≠c
 11 300       ≠b ≠c
 12 4-- --    ≠d
 13 5-- -
 14 590
 15 6-- --
 16 7-- --    ≠d
 17 8-- --
```

Figure 6

ILL TRANSACTION RECORD WORK FORM

ILL:	Borrower:	Req Date:	Status:
OCLC:	Need Before:	Rec Date:	Renewal Req:
Lender:		Due Date:	New Due Date:

1 CALLNO:

2 AUTHOR:

3 TITLE:

4 EDITION:

5 IMPRINT:

6 ARTICLE:

7 VOL: NO: DATE: PAGES:

8 VERIFIED:

9 PATRON:

10 SHIP TO:

11 BILL TO:

12 SHIP VIA: MAXCOST:

13 BORROWING NOTES:

14 LENDING CHARGES: DATE SHIPPED: SHIP INSURANCE:

15 LENDING RESTRICTIONS:

16 LENDING NOTES:

17 RETURN TO:

18 RETURN VIA:

19 RETURNED VIA: RETURNED DATE: INSURANCE:

Figure 7 & 8

ILL MESSAGE WAITING SCREEN

MF/

The following messages are in your Message Waiting File:

1. 7 ILL Requests
2. 4 ILL Responses
3. 4 ILL Renewals
4. 2 ILL Recalls

ILL RESPONSE SCREEN

ILL Responses:

ILL No	Status
1. 95411	Shipped
2. 41781	Retry 800613
3. 32851	Unfilled
4. 47931	Expired
5. 75132	Will Supply

Figure 9

SAMPLE
CATALOGING WORKFLOW

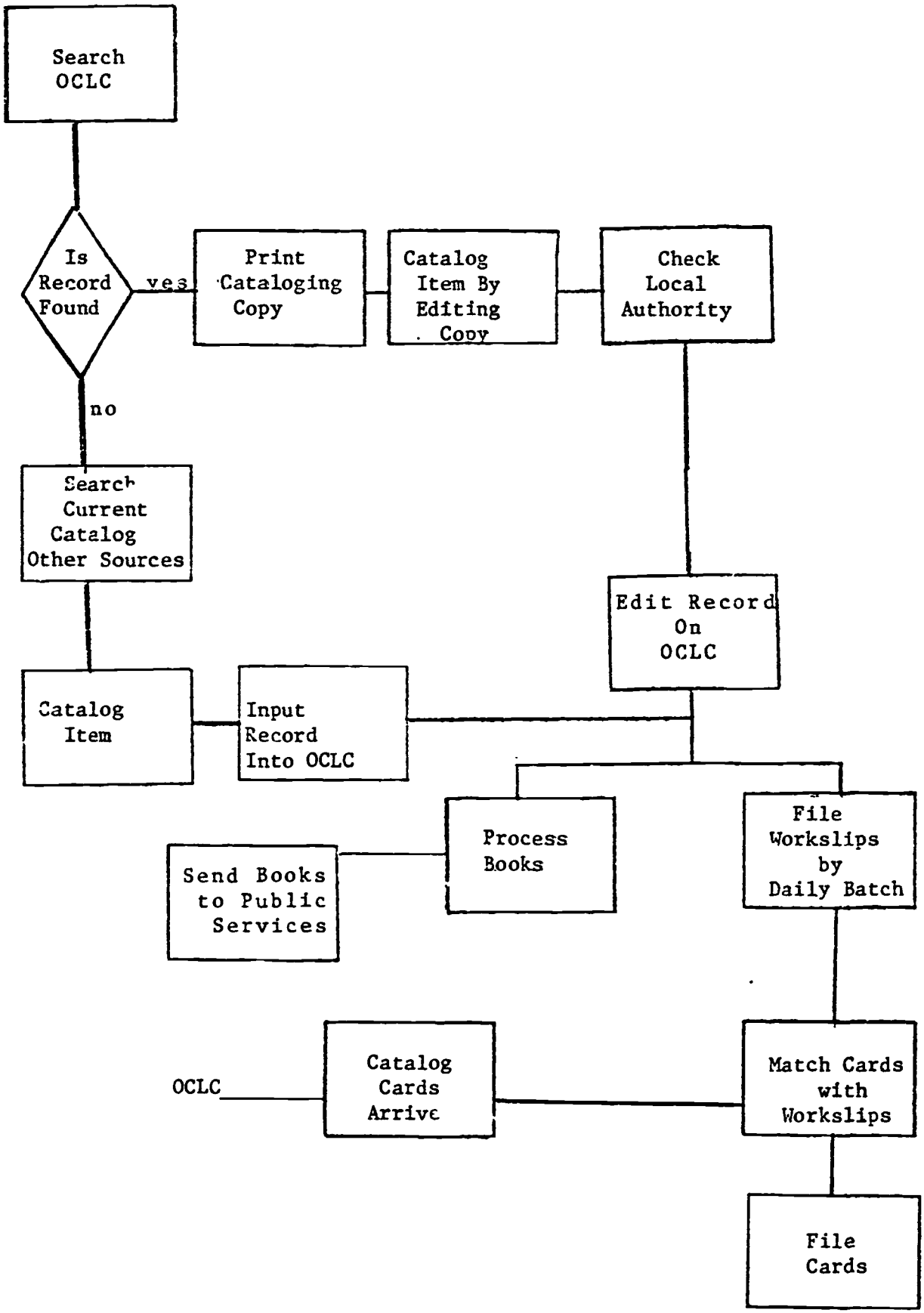

Figure 10

NETWORKS OFFERING OCLC SERVICES

AMIGOS	AMIGOS Bibliographic Council 11300 North Central Expressway Suite 321 Dallas, TX 75243 (214) 750-6130
BCR	Bibliographic Center for Research 245 Columbine, Suite 212 Denver, CO 80206 (800) 525-0190
CAPCON (Capitol Consortium Network)	Consortium of Universities of the Washington Metropolitan Area 1717 Massachusetts Avenue, NW Washington, DC 20036 (202) 667-4416
CCLC	Cooperative College Library Center 159 Forrest Avenue, NE, Suite 602 Atlanta, GA 30308 (404) 659-6886
FAUL	Five Associated University Libraries 757 Ostrom Avenue Syracuse, NY 13210 (315) 423-3021
FEDLINK	Federal Library Committee Library of Congress, Room 400 Building 159, Navy Yard Annex Washington, DC 20540 (202) 287-6055
ILLINET	ILLINET Bibliographic Data Base Service Illinois State Library Centennial Building, Room 537 Springfield, IL 62756 (217) 785-1532

Figure 10

INCOLSA	Indiana Cooperative Library Services Authority 1100 West 42nd Street Indianapolis, IN 46208 (317) 926-3361
MIDLNET	Midwest Regional Library Network University of Wisconsin at Green Bay 2420 Nicolet Drive Green Bay, WI 54302 (414) 465-2750
MINITEX	Minnesota Interlibrary Telecommunication Exchange, MULS/OCLC Office S-33 Wilson Library 309 19th Avenue South University of Minnesota Minneapolis MN 55455 (612) 376-3926
MLC	Michigan Library Consortium 720 Science Library Wayne State University Detroit, MI 48202 (313) 577-4061
NEBASE	Nebraska Library Commission 1420 P. Street Lincoln, NE 68508 (402) 471-2045
NELINET	NELINET 385 Elliott Street Newton, MA 02164 (617) 969-0400
OHIONET	OHIONET 2929 Kenny Road, Suite 280 Columbus, OH 43221 (800) 282- 8975

Figure 10

PALINET	PALINET 3420 Walnut Street Philadelphia, PA 19104 (215) 382-7031
PRLC	Pittsburgh Regional Library Center Chatham College Pittsburgh, PA 15232 (412) 441-6409
SOLINET	Southeastern Library Network Suite 410 615 Peachtree Street, NE Atlanta, GA 30308 (404) 892-0943
SUNY	State University of New York SUNY/OCLC Network State University Plaza Albany, NY 12246 (518) 474-1685
OCLC WESTERN	OCLC Western Service Center 9th and Dartmouth Claremont, CA 91711 (714) 621-8046
WLC	Wisconsin Library Consortium 464 Memorial Library 728 State Street Madison, WI 53706 (608) 263-5051

GLOSSARY

Access Points	Points through which an entire record can be displayed if one part is keyed on the terminal.
CRT	Cathode ray tube. A terminal and information display device that looks like a small television set attached to a typewriter-like keybord.
Card Pack	The complete set of cards that is sent to your institution after you hit the *produce* and *send* keys.
Cursor	A blinking vertical line displayed on the screen that indicates the screen position of the next character to be input.
Data Element	A unit of information.
Dedicated Line	A telephone line tied to the sole purpose of transporting information from one point to another.
Delimiter	A special symbol used to separate data elements within a field. The system depicts the delimiter on CRT screens as a double dagger (≠).
Field	A collection of data elements treated as a single unit. Each field possesses a name describing the contents of the field.
Field Terminator	A single character terminating each field within a record, OCLC depicts the field terminator on the CRT screen as a paragraph mark (¶).
Fixed Field	A field whose data always contain the same number of characters.
Format	The framework of fixed and variable fields within a record.
Indicator	A one-character code that supplies information about a field in addition to information derived from the tag.

Figure 11

MARC Format	Machine-readable cataloging, a format adopted by the Library of Congress to provide computer identification of data elements.
Modem	Contraction of "modulator-demodulator". A device that converts digital data into signals suitable for transmission over telephone communication lines, and vice versa.
On-Line	The connection of a distant user terminal to a central computer through a continuing communication hook-up.
Profile	The description of an individual library's cataloging procedures for OCLC program creation.
Response Time	The time it takes for the information keyed on the keyboard to travel to the main computer for processing and for the appropriate answer to appear on the screen.
Subfield Codes	Lower case alphabetic characters used in conjunction with delimiters to identify data elements within a variable field.
Tag	A label that indicates, for identification, a variable field.
Terminal	A machine used to manipulate and to communicate alphanumeric text to and from a computer located at a distance.
Time-Sharing	Use of a central computer by many individuals in different locations at the same time.
Variable Field	A field whose data contains variable numbers of characters.